MISSOURI VEHICLE STOPS 2022 ANNUAL REPORT

MISSOURI ATTORNEY GENERAL'S OFFICE

Missouri Vehicle Stops 2022 Annual Report

Contents

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As the chief legal officer for the state, my job is to protect all six million Missourians from crime, fraud and abuse. It is a responsibility I take seriously. Our government works best when it serves the interests of the people and protects the rule of law.

The Office of the Missouri Attorney General is required by statute to collect data on the demographics of traffic stops, and to report these findings to the Governor and the people's elected representatives. These data provide important metrics for measuring the frequency and context of traffic stops across the state.

This report aggregates traffic stop data from more than 500 law enforcement agencies, and breaks it down by search rate, demographics and arrest rate.

BACKGROUND

Concerns by Missouri citizens and the General Assembly regarding allegations of bias in traffic enforcement prompted the passage of SB 1053 (2000). SB 1053 created Section 590.650, RSMo. which became effective August 28, 2000. This statute created the Vehicle Stops Report (VSR) and required that the Attorney General's Office (AGO) collect and report on traffic stops conducted by law enforcement officers across the state.

Under § 590.650, RSMo. all peace officers in the state must report specific demographic information for each vehicle stop made. Law enforcement agencies must provide their vehicle stops data to the Attorney General by March 1, and the Attorney General must compile the data and report to the Governor, General Assembly, and each law enforcement agency no later than June 1 of each year. The law allows the Governor to withhold state funds for any agency that does not submit its vehicle stops data to the Attorney General by the statutory deadline.

After reviewing analysis of the VSR, and conferring with law enforcement leaders across the state, the Attorney General's Office began implementing comprehensive changes to the VSR in 2019. These changes have improved the information collected for the report and resulted in a fundamental shift in the level of analysis available in the VSR. Three new questions were added to the report. They sought, (1) information on officer assignment during the stop, (2) the residential zip code of the stopped driver, and (3) the cause of citations or warnings issued to the driver. In addition, other questions were adjusted for clarity or to improve the value of the data they collected by adding new response options.

The most significant change to the VSR was its shift toward collecting disaggregated data from across the state. Previously, most agencies reported the aggregate number of stops meeting the criteria for each question, and broke them down only by the race and ethnicity of the individual stopped. That reporting framework prevented incident-level analyses that takes into consideration other factors such as driver age, driver sex, and time of stop. Multivariate analysis of incident-level data significantly improved VSR analysis. The AGO also implemented an optional data collection framework that collects all variables for each stop an agency made during the year, rather than just totals by race for each agency. These changes became effective January 2020 and are reflected in this VSR.

This year's report provides more detail and in-depth analyses than earlier reports, while still retaining all information contained in earlier versions.

The summary of statewide vehicle stops data has been provided by a team of researchers in the Economic and Policy Analysis Center at the University of Missouri in Columbia. The team is led by Dr. Brittany Street, Assistant Professor of Economics; other team members include graduate students, Emma Gould and Tabitha Juneau, and Dr. Jeffrey Milyo, Professor and Chair of the Department of Economics.

STATEWIDE METRICS

This report summarizes traffic stop data from 581 law enforcement agencies in Missouri that reported data for calendar year 2022. Of these, 35 agencies reported no traffic stops during the year; these agencies often contract out traffic enforcement to another agency covering their jurisdictions and focus on other enforcement activities. In total, this report represents approximately 95% of the 613 active law enforcement agencies in the state. The statewide data described in this section are also presented in the same manner for each agency in the attached agency reports.

[1]See list of Agencies with Zero Stops on page 19.

STATEWIDE METRICS CONTINUED

In 2022, the agencies filing reports recorded 1,273,509 vehicle stops, resulting in 75,014 searches and 49,122 arrests. Table 1 provides summary data on stops, searches, arrests, and citations, broken out by race and ethnic group; this facilitates comparisons across groups and over time using past reports. More detailed data on vehicle stops and outcomes of stops are listed in Tables 4 and 5, located at the end of this report.

The 2022 VSR should be viewed in the context of substantial changes relative to the past few years as it relates to traffic on the roads and police policies, due to the COVID-19 environ-

ment. First, the pattern of driving is likely still different than pre-pandemic patterns affecting which drivers are on the road and how much; for example, many individuals still worked remote part/full-time in 2022. Second, law enforcement policies may have shifted in a variety of ways to minimize interpersonal contact, keep jail capacity low, or adjust to staffing shortages.

Consequently, these factors must be considered when comparing data for 2022 to prior and future years. For example, overall stops (and arrests) in 2022 were up 4% (down 0.5%) from 2021 and up 10% (10%) from 2020, but 16% (34%) lower than overall stops (arrests) in 2019. Meanwhile, searches continued

to fall with 2022 searches 10%, 21% and 27% lower than 2021, 2020 and 2019, respectively.

In 2022, the agencies filing reports recorded 1,273,509 vehicle stops, resulting in 75,014 searches and 49,122 arrests.

Table 1 provides summary data on stops, searches, arrests, and citations, broken out by race and ethnic group; this facilitates comparisons across groups and over time using past reports[2]. More detailed data on vehicle stops and outcomes of stops are listed in Tables 4 and 5, located at the end of this report[3].

[2] Race and ethnicity are recorded based on officer perception at the time of the vehicle stop.
[3] The analysis in the report is based on the aggregated data reported by each agency. Thus, it relies on the assumption of accuracy in the reported data in terms of the tallying of stops and resulting outcomes, the distinction between resident and non-resident drivers, etc.

TABLE 1: RATES BY RACE FOR MISSOURI

	Total	White	Black	Hispanic	Native American	Asian	Other
Population	.	.	.	.	.	.	.
2021 ACS pop.	4910777	4018782	535276	183165	16570	101636	238513
2021 ACS pop. %	100	81.84	10.9	3.73	0.34	2.07	4.86
2020 Decennial pop.	4775612	3723642	514169	197173	18642	104558	217428
2020 Decennial pop. %	100	77.97	10.77	4.13	0.39	2.19	4.55
Totals	.	.	.	.	.	.	.
All stops	1273509	984097	220556	36105	1927	12825	17999
Resident stops	629676	521066	82704	15772	725	5179	4230
Searches	75014	53976	17303	2760	110	418	447
Contraband	28922	20691	7137	799	36	111	148
Arrests	49122	34951	11596	1880	73	303	319
Citations	547816	390174	127138	18795	788	5845	5076
Rates	.	.	.	.	.	.	.
Stop rate	25.93	24.49	41.2	19.71	11.63	12.62	7.55
Stop rate, residents	12.82	12.97	15.45	8.61	4.38	5.1	1.77
Search rate	5.89	5.48	7.85	7.64	5.71	3.26	2.48
Contraband hit rate	38.56	38.33	41.25	28.95	32.73	26.56	33.11
Arrest rate	3.86	3.55	5.26	5.21	3.79	2.36	1.77
Citation rate	43.02	39.65	57.64	52.06	40.89	45.58	28.2

Table 1 lists the number of traffic stops for residents of the community served by a particular agency. Stop rates are therefore calculated for all stops and for the subset of vehicle stops involving only residents. However, because only aggregate data is currently required to be reported by agencies, it is not possible to calculate search rates, arrest rates, etc. for residents, nor is it possible to break down the detailed data in Tables 4 and 5 (below) for residents only. In the future, as more agencies report incident-level data, a more detailed breakdown of data by residence will be feasible. For consistency and ease of exposition, all subsequent discussion of these data refers to total vehicle stops by agencies.

Notes: The American Community Survey five-year population estimates for ages 16+ as of 2021 are used for Missouri. The ACS only provides race-specific Hispanic estimates for White, meaning non-White Hispanic residents are double-counted in the 2021 race percentages above.

Stop rate = (stops / 2021 population) X 100.
Stop rate, residents only = (stops by residents / 2021 population) X 100.
Search rate = (searches / stops) X 100.
Contraband hit rate = (searches with contraband found / total searches) X 100.
*Arrest rate = (arrests / stops) X 100.*
*Citation rate = (citations / stops) X 100.*

FIGURE 1:
TOTAL STOPS ACROSS AGENCIES FOR MISSOURI

Figure 1 provides more context by comparing traffic stops by agencies to their associated community population for both the total population (left side) and the non-white population (right-side) in each community. For example, the Columbia Police Department is matched to the total and non-white population for the city of Columbia, and so on. Agencies that do not match directly to census geographies, such as university and airport police, are assigned a population of zero.
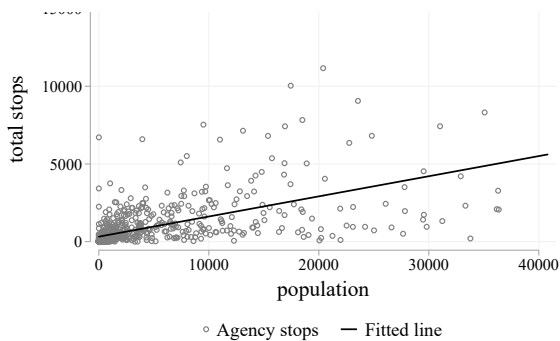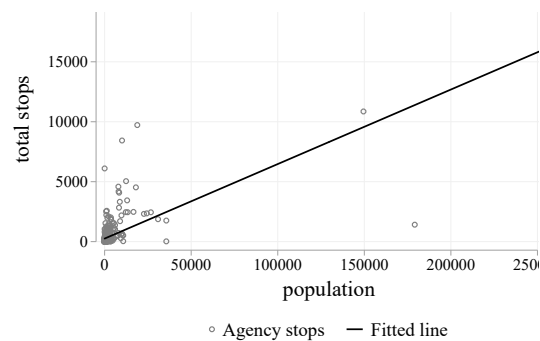
(a) Total stops, pop. below median
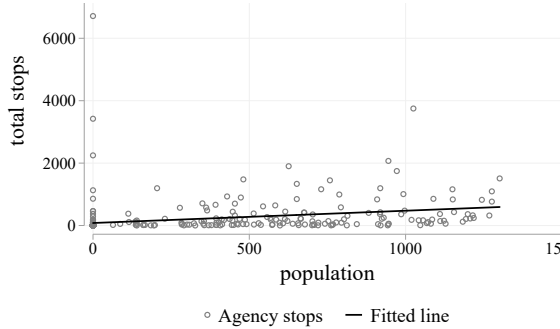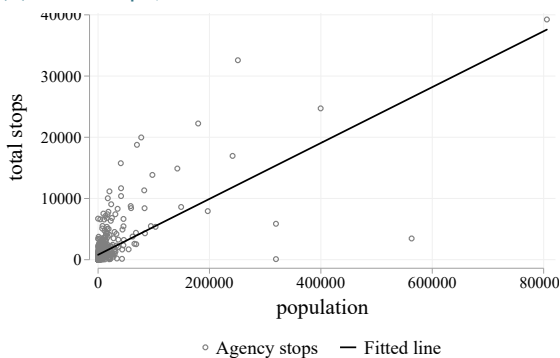
(b) Non-white total stops, pop. below median
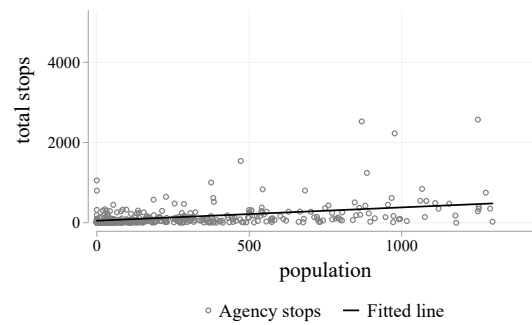
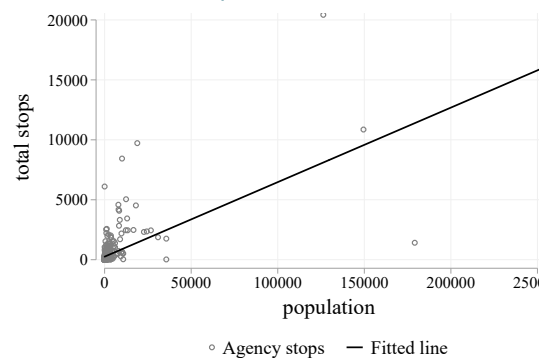(c) Total stops, pop. below 95th percentile

(d) Non-white total stops, pop. below 95th percentile

(e) Total stops, all

(f) Non-white total stops, all

Notes: Figure (a) depicts the total number of stops for all agencies with a total population less than the median population size (1,953 persons) in Missouri plotted against population size. Similarly, Figure (b) shows the total number of non-white stops by the non-white population size for each agency for those same agencies. Figures (c) and (d) follow the same format but for agencies with a total population less than the 95th-percentile (43,795 persons). Finally, graphs (e) and (f) graph all agencies, except the Missouri State Highway Patrol, which covers the entire state. Population is measured using the 2021 American Community Survey 5-year estimates for Missouri. The ACS only provides race-specific Hispanic estimates for Whites. To avoid double counting, we calculate the total Non-White population as the total population minus the Non-Hispanic White population for each agency. Agencies without population (e.g., university police) are considered to have a population of zero.

The panels in Figure 1 are split across three rows according to community size; this facilitates comparisons across agencies serving similar-size communities. The panels in the first row focus only on agencies serving smaller communities (less than median population, or 1,953 persons), while the second row of panels covers agencies serving all but the largest 5% of cities (i.e., communities with less than 43,795 persons) and the last row of panels includes all agencies, except the Missouri State Highway Patrol. Each panel in Figure 1 also includes a "best fit" line that indicates the relationship between stops and population (i.e., the stop rate for the agencies and communities listed in each panel). The agency detailed reports replicate Figure 1 and highlight the location of each agency in this figure, which facilitates comparisons to other agencies.
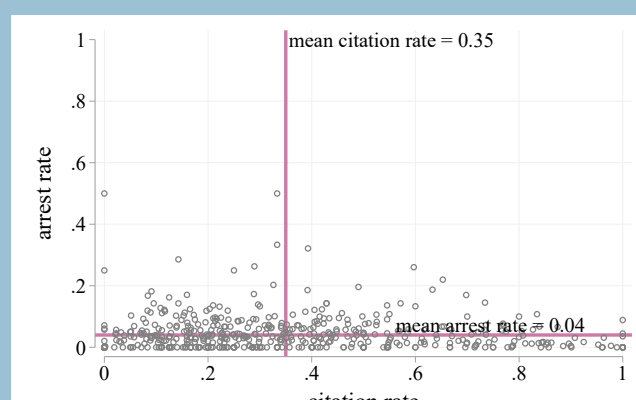
FIGURE 2:

CITATION, ARREST, SEARCH AND HIT RATES ACROSS AGENCIES FOR MISSOURI

Figure 2 describes the other outcomes of interest for vehicle stops (i.e., arrests, citations, searches and the discovery of con¬traband during a search, or "hits"), by the agency. The data are reported as rates, for all stops (left side) and for only stops involving the non-white population (right side).

(a) Arrest and citation rate
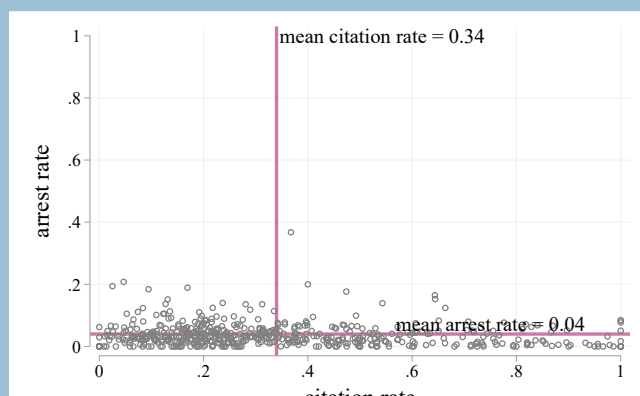
(b) Non-white arrest and citation rate

(c) Search and hit rate
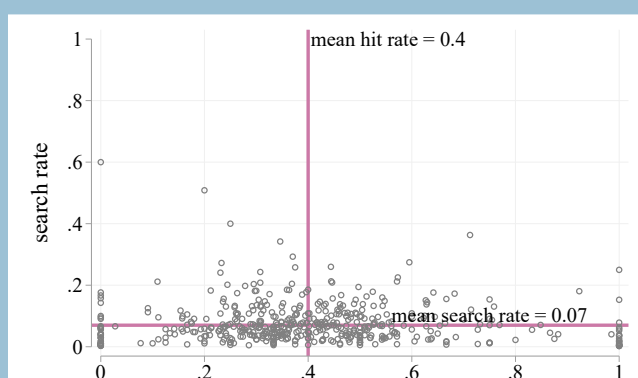
(d) Non-white search and hit rate
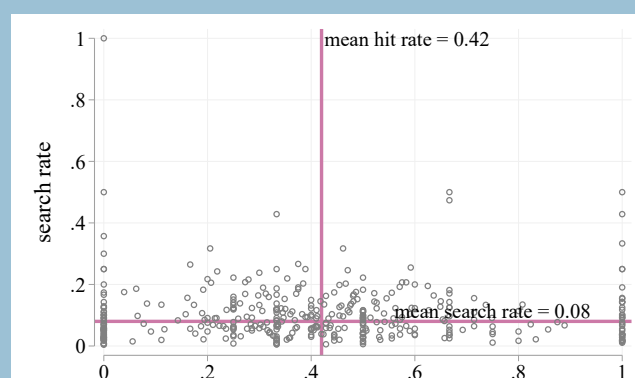
Notes: Figure (a) graphs the arrest rate and citation rate for all agencies in Missouri. Similarly, Figure (b) graphs the arrest rate and citation rate for all non-white stops. Figure (c) graphs the search rate and hit rate for all agencies in Missouri. Similarly, Figure (d) graphs the search rate for all non-white stops and hit rate for all non-white searches.

The panels in the first row of Figure 2 show the distribution of agency citation rates and arrest rates per 100 stops compared to the average rates for all agencies[4]. Agencies located in the upper right quadrants of these figures exhibit higher than average arrest and citation rates, while those in the lower left quadrant exhibit lower than average rates for both arrests and citations.

[4]Agencies that conduct very few searches will be more likely to cluster at quotients of small values, such as 0, .5, and 1 for the search and hit rates. This effect is particularly noticeable in the non-White search and hit rate charts due to smaller raw counts of searches for this population.

The panels in the second row of Figure 2 describe the search rate per 100 stops and the contraband hit rate per search, as well as the mean for these rates across all agencies. Agencies in the lower right quadrant conduct relatively few searches with higher contraband hit rates. Agencies in the upper left quadrant conduct relatively more searches with fewer contraband hit rates. The agency detail reports replicate Figure 2 and highlight the location of each agency in the figure.

DATA LIMITATIONS FOR COMPARING DIFFERENCES

When comparing these summary metrics across agencies or different population groups, several caveats must be considered. First, driving patterns and composition of the driving communities. Second, traffic enforcement, the frequency of calls to police, and discretionary stops and searches also vary across agencies. Consequently, agencies may exhibit different stop rates or search rates due to the composition of drivers encountered by the agency, the enforcement policies implemented by the agency, or some combination of these and other factors.

For example, traffic stops that are the result of investigative stops or emergency calls may generate higher arrest rates than stops resulting from the enforcement of speed limits. Similarly, an arrest will almost always lead to a search, while searches of motorists during routine traffic stops are likely more rare and highly discretionary. Any comparison of search rates and hit rates must then consider the frequency of discretionary searches. As more agencies report incident-level data, accounting for such distinctions may become possible in subsequent reports.

The same caveats apply when examining disparities in traffic stops and resulting outcomes across racial and ethnic groups. Observed differences may result from differential impacts of policing, differential treatment by police, or some combination of these and other factors. Differential treatment refers to bias (unintended or not), whereas differential impact refers to several potential sources of disparities that are not a direct result of bias on the part of officers conducting vehicle stops. An example of differential impact would be if one population group has more outstanding warrants on average, then that group would have a higher arrest rate not because officers' actions were different with respect to each group, but because the same enforcement action, arresting drivers with outstanding warrants, disproportionately impacts one group more than another. Similarly, existing patterns of residential concentrations by race may result in a differential impact of policing across racial and ethnic groups if officers more intensively patrol some beats due to more calls for service, higher crime rates, or other factors.

The sources of disparate impacts are themselves of interest and should be considered by policymakers and the public, but they are not the direct result of differential treatment by officers conducting vehicle stops. Consequently, the presence of large or persistent disparities is not necessarily an indication of bias in policing. For these reasons, no single metric is capable of identifying or disproving bias in policing. Instead, these data are presented for the purpose of informing a continuing conversation among the public and policymakers regarding differences in traffic stops and outcomes across agencies, as well as the sources of disparities in these measures across racial and ethnic groups.

DIFFERENTIAL HIT RATES

In addition to the metrics described in Table 1 above, a frequently employed proxy for bias in searches is the difference in contraband "hit rates" across groups. The logic of comparing hit rates is as follows: i) if discretionary searches are conducted for the purpose of discovering contraband, and ii) police search motorists only when they estimate that the probability of finding contraband exceeds some threshold (e.g., 30%), then unbiased search behavior will result in a hit rate that is equalized across groups, although search rates may vary across groups. For example, if one group is more likely to possess contraband, then unbiased search behavior will lead to a higher search rate for that group, until the probability of finding contraband is equalized across different groups. Consequently, differences in hit rates are an indicator of differential treatment, while differences in search rates are not necessarily an indicator of differential treatment.

The analytical benefit of differential hit rates is based on the maintained assumption that searches are discretionary. However, this is not always the case. As an example, many agencies have a policy of searching any individual being arrested for obvious reasons of officer safety and investigative integrity. Thus, a high number of arrests might skew the hit rate with non-discretionary searches. The aggregate data reported by most agencies does not allow for any distinction between discretionary and non-discretionary searches, but as more agencies report incident-level data, such a distinction will be feasible. Yet another consideration is that large differences in search rates across groups may be considered problematic even if hit rates are equalized across racial and ethnic groups, since searches are invasive. For this reason, it is useful to consider the frequency of searches alongside hit rates. Finally, because searches are relatively infrequent, a comparison of differential hit rates is not informative unless there are a sufficient number of searches conducted for each population group.

FIGURE 3:
RELATIVE HIT RATES FOR THE TOP 25 AGENCIES WITH THE MOST SEARCHES

(a) 2022
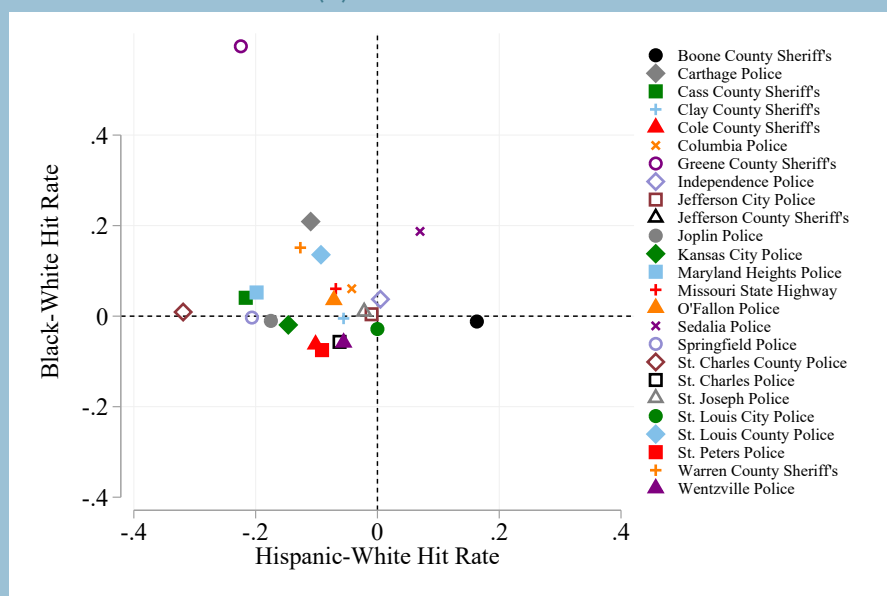
(b) 2010
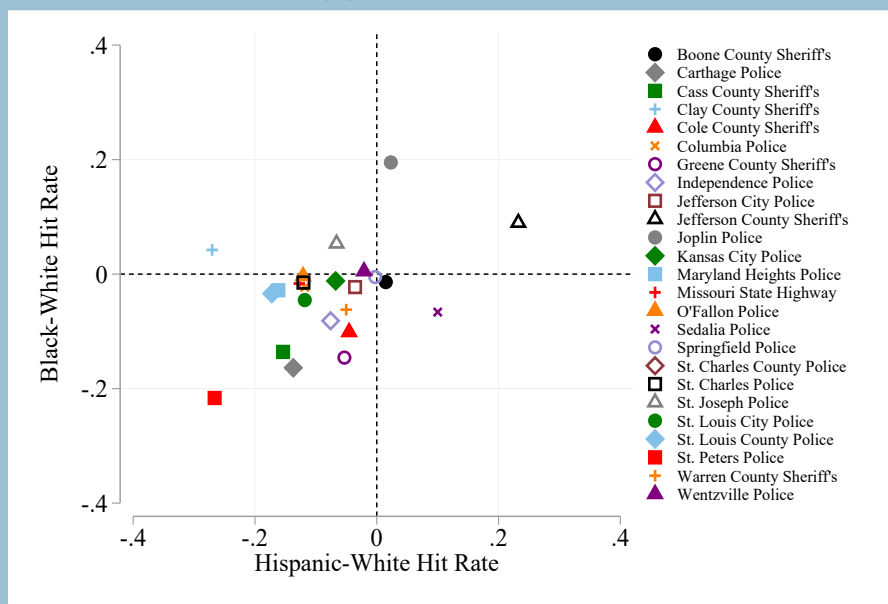
Notes: The race specific hit rate is calculated as the number of searches that find contraband divided by the total number of searches for a specific race. The difference between the Black and White hit rates and the Hispanic and White hit rates are plotted on the y- and x-axis, respectively.

Figure 3 shows the differential hit rates for the 25 largest agencies in the state by the number of searches; the same agencies are shown for two snapshots in time: 2022 (in panel a) and 2010 (in panel b). The data are plotted such that the lower-left quadrant is associated with theoretical "over-searching" the Black and Hispanic population relative to the White population, while the upper-right quadrant is associated with theoretical "over-searching" the White population, relative to the Black and Hispanic population. If all searches are discretionary, then unbiased searches would result in all agencies being located at the origin in the figures (0,0). However, deviations from the center are expected, since not all searches are discretionary. Consequently, the location of a given agency in these figures is not necessarily an indication of bias in searches by police, but persistent outliers may warrant further examination.

Looking across the two panels of Figure 3, it is apparent that differential hit rates have drifted over time away from the lower-left quadrant associated with theoretical over-searching Black and Hispanic motorists, and toward the upper-right quadrant associated with theoretical under-searching of Black and Hispanic motorists. However, this apparent shift is based only on these two snapshots in time, so it may be the result of random variation in the data as opposed to a persistent trend. Future reports will explore patterns in differential hit rates over time and across agencies in more detail. And as more agencies report incident-level data on stops, it will be possible to calculate differential hit rates using only the subset of discretionary searches.

DISPARITY INDEX

Another measure that has been examined in previous reports is the "Disparity Index," or the ratio of a particular group's share of traffic stops divided by that group's share of the population. For example, if 100% of traffic stops involve Black drivers, but the percentage of Black residents in the associated population is only 10%, then the Disparity Index would be 10 for that hypothetical case.

When the Disparity Index is equal to 1, then the reference group is represented equally in both traffic stops and population. For values greater than 1, the reference group is over-represented in traffic stops relative to the population. Consequently, the Disparity Index is a summary measure that captures the same information that can be gleaned by looking at stop rates across groups, albeit in one convenient number. However, because it is a ratio, the Disparity index is also problematic for making comparisons across communities.

For example, the maximum value of the Disparity Index varies with the reference group's share of the population. In other words, the larger the share of population for a given group, the lower the maximum possible Disparity Index is for that group. Reconsider the example above when 100% of traffic stops involve Black drivers, but now the community population is 50% Black. The Disparity Index will be 2, even though in both cases, only Black drivers are stopped. For this reason, it is not informative to compare Disparity Indices across communities with very different population shares.

As with the other metrics discussed above, the Disparity Index is not a measure of bias in policing. Disparities may be generated by many factors, including:

- Policing strategies and policies: Law enforcement officials make strategic choices on where and when to police that may disproportionately impact various racial/ethnic groups. Strategies such as concentrating patrols in areas within a city with higher crime rates, could lead to a disproportionate impact if that area has a higher concentration of a racial/ethnic group than the jurisdiction as a whole. (Disparate impact)
- Differences in real rates of offending between racial/ethnic groups: The correlation of dynamics such as economic or social disadvantage with race or ethnicity may lead to differences in rates of real offending. If there are real differences in offending rates, traffic stops should theoretically increase or decrease accordingly. (Disparate impact)
- Implicit or Explicit bias: Implicit bias refers to subconscious or unconscious biases that influence the decisions and perceptions of individuals. Implicit bias can be difficult to detect, even for the individual operating under its influence. Explicit bias refers to conscious bias towards a specific group. (Disparate treatment)
- Incorrect population benchmark: Estimated population characteristics may not accurately measure the racial and ethnic composition of drivers. Further, changes in population demographics may not be fully captured in population estimates. (Measurement error)

For these reasons, changes in the value of the Disparity Index over time are not informative about changes in the prevalence of bias in traffic stops. In other words, it is possible for bias in traffic stops to be increasing even though the Disparity Index is falling due to changing demographics or policing patterns; the converse is also true.

TABLE 2: DISPARITY INDEX FOR MISSOURI

Table 2 shows the Disparity Index for each racial and ethnic group, using both all traffic stops and only stops of residents. The population shares for each group are taken from the most recent American Community Survey conducted by the U.S. Census Bureau. Table 3 shows the Disparity Index for every year that this report has been generated. However, previous versions of this report have employed different sources for population estimates, so caution should be used when comparing Disparity Index values over time (see notes to Table 3).

	Total	White	Black	Hispanic	Native	Asian	Other
Population	.	.	.	.	.	.	.
2021 ACS pop.	4,910,777	4018782	535276	183165	16570	101636	238513
2021 ACS pop. %	100	81.84	10.9	3.73	0.34	2.07	4.86
2020 Decennial pop.	4775612	3723642	514169	197173	18642	104558	217428
2020 Decennial pop. %	100	77.97	10.77	4.13	0.39	2.19	4.55
Stops	.	.	.	.	.	.	.
All stops	1273509	984097	220556	36105	1927	12825	17999
Resident stops	629676	521066	82704	15772	725	5179	4230
Disparity index	.	.	.	.	.	.	.
All stops ACS	.	0.944	1.589	0.76	0.448	0.487	0.291
Resident stops ACS	.	1.011	1.205	0.672	0.341	0.397	0.138
All stops DEC	.	0.991	1.609	0.687	0.388	0.46	0.31
Resident stops DEC	.	1.061	1.22	0.607	0.295	0.376	0.148

Notes: 2022 Disparity Index is based on 2017-2021 average population estimates from the U.S. Census Bureau's American Community Survey (ACS) for ages 16+ for Missouri. The ACS only provides race-specific Hispanic estimates for White, meaning non-White Hispanic residents are double-counted in the 2021 race percentages above.

Disparity Index = (proportion of stops/proportion of population). A value of 1 indicates no difference between the share of stops and share of local population for a given group. Values greater than one indicate over-representation in the share of stops relative to local population, while a value less than 1 indicates under-representation.

TABLE 3:
# DISPARITY INDEX FROM 2000 TO 2022 FOR MISSOURI

	White	Black	Hispanic	Native American	Asian	Other
2000	0.97	1.27	0.98	0.12	0.58	0.67
2001	0.98	1.33	0.96	0.27	0.68	0.56
2002	0.97	1.36	1.05	0.23	0.68	0.58
2003	0.97	1.36	1.05	0.2	0.69	0.6
2004	0.97	1.34	1.07	0.2	0.67	0.63
2005	0.97	1.42	0.97	0.2	0.56	0.58
2006	0.95	1.49	1.09	0.19	0.58	0.62
2007	0.95	1.58	1	0.18	0.54	0.62
2008	0.95	1.59	0.95	0.18	0.52	0.56
2009	0.95	1.62	0.81	0.17	0.55	0.54
2010	0.95	1.61	0.78	0.16	0.54	0.51
2011	0.95	1.63	0.65	0.2	0.5	0.61
2012	0.96	1.57	0.6	0.2	0.5	0.65
2013	0.96	1.59	0.61	0.25	0.52	0.53
2014	0.95	1.66	0.62	0.28	0.52	0.56
2015	0.95	1.61	0.68	0.27	0.53	0.58
2016	0.94	1.65	0.75	0.28	0.54	0.62
2017	0.93	1.72	0.75	0.36	0.55	0.63
2018	0.92	1.76	0.77	0.32	0.56	0.71
2019	0.92	1.79	0.79	0.33	0.54	0.71
2020	0.95	1.63	0.73	0.37	0.44	0.41
2021	0.95	1.68	0.72	0.42	0.43	0.33
2022	0.94	1.59	0.76	0.45	0.49	0.29

Notes: In the years 2000-2004 the disparity index was calculated using the 2000 Decennial Census (ages 16+), 2005-2010 uses the annual updates from Geolytics Inc, 2011-2019 use the 2010 Decennial Census (ages 16+), and 2020-2022 use the annual 5-year population estimates from the American Community Survey (ages 16+) for Missouri. Hispanics may be of any race. Other includes persons of two or more races or unknown race.

Disparity Index = (proportion of stops/proportion of population). A value of 1 indicates no difference between the share of stops and share of local population for a given group. Values greater than one indicate over-representation in the share of stops relative to local population, while a value less than 1 indicates under-representation.

The Disparity Index for traffic stops and a given population in this year's report can show values that are greater than one or less than one. Changes to the Disparity Index over time for different groups are captured in Figure 4, which plots the values in Table 3 over time (the vertical lines in Figure 4 indicate a change in the source for population used in calculating the Disparity Index). Again, the recent changes in the value of the Disparity Index reflects multiple factors, including changing population shares between the 2010 census data employed in 2019's report and the 2022 ACS population estimates employed in this report.

FIGURE 4:
DISPARITY INDEX FROM 2000 TO 2022 FOR MISSOURI
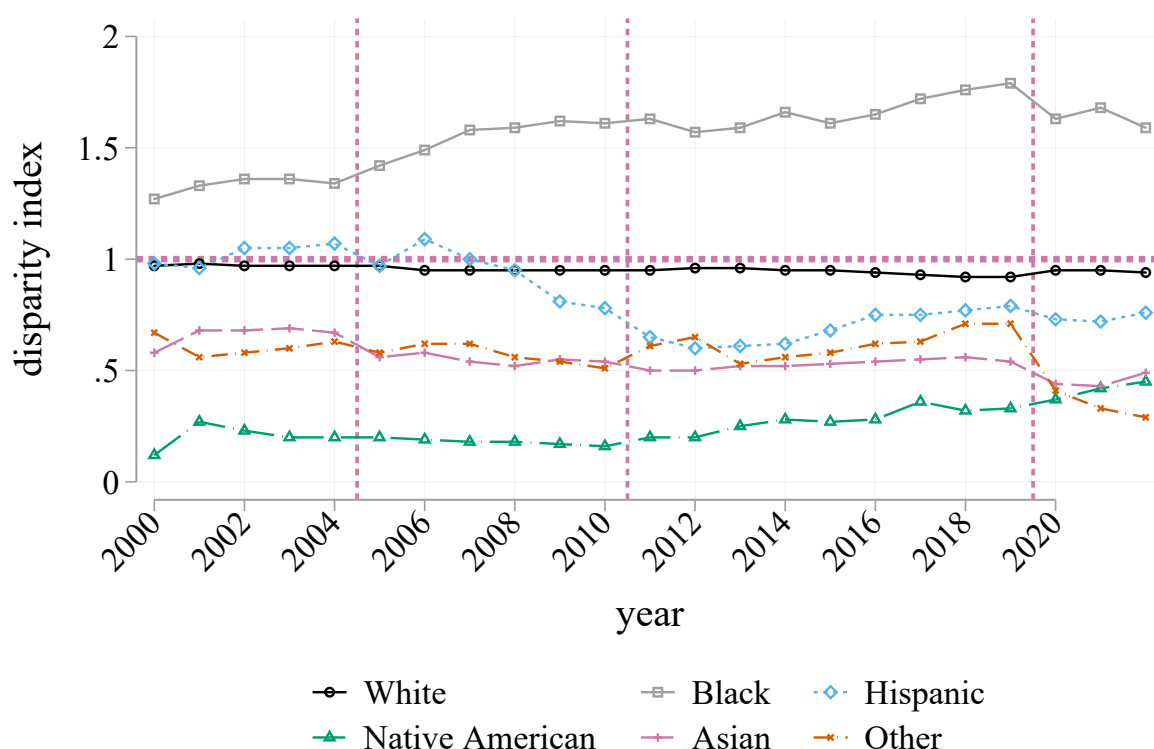
Notes: In the years 2000-2004 the disparity index was calculated using the 2000 Decennial Census (ages 16+), 2005-2010 uses the annual updates from Geolytics Inc, 2011-2019 use the 2010 Decennial Census (ages 16+), and 2020-2022 use the annual 5-year population estimates from the American Community Survey (ages 16+) for Missouri. Hispanics may be of any race. Other includes persons of two or more races or unknown race. Changes in the source of population estimates are noted by the vertical dashed lines before 2005, 2011, and 2020.

Disparity Index = (proportion of stops/proportion of population). A value of 1 indicates no difference between the share of stops and share of local population for a given group. Values greater than one indicate over-representation in the share of stops relative to local population, while a value less than 1 indicates under-representation.

Tables 4 and 5 provide more detailed information on traffic stops, also broken down by race and ethnic group. The agency reports follow the same presentation format as shown here, but exclude the figures showing differential hit rates by community.

TABLE 4:

NUMBERS OF STOPS BY RACE FOR MISSOURI

	Total	White	Black	Hispanic	Native American	Asian
All Stops	1273509	984097	220556	36105	1927	12825
Resident Stops	629676	521066	82704	15772	725	5179
Non-Resident Stops	643833	463031	137852	20333	1202	7646
Reason for Stop	.	.	.	.	.	.
Moving	724032	559263	120261	24124	1374	9449
Equpiment	167383	132468	26417	4382	266	1253
License	401834	302400	83329	7662	452	2178
Investigative	42384	30224	9595	1325	52	303
Stop Outcome	.	.	.	.	.	.
Searches	75014	53976	17303	2760	110	418
Contraband	28922	20691	7137	799	36	111
Arrests	49122	34951	11596	1880	73	303
Citation	547816	390174	127138	18795	788	5845
Warning	986990	798501	135361	29324	1479	9915
No action	39920	27159	10398	1458	61	364
Location of Stop	.	.	.	.	.	.
Interstate hwy	168729	114294	40864	8373	358	3074
US hwy	213539	178941	24237	6725	315	2022
State hwy	305406	256276	35414	7477	423	2313
County road	77075	54146	19131	1036	97	668
City street	435884	329692	82862	11810	643	4063
Other	69076	46725	18074	610	80	631
Driver Gender	.	.	.	.	.	.
Male	782509	602400	131653	26945	1293	8538
Female	491506	381950	89252	9139	622	4285
Driver Age	.	.	.	.	.	.
17 and under	49074	41691	5108	1203	55	315
18-29	448612	327097	93999	15225	734	4819
30-39	306226	228536	60036	9751	454	2885
40-64	370209	295685	55249	9448	566	4082
65 and over	381253	372711	6478	452	118	721

Notes: Data reported by the agency to the Attorney General's Office covering all traffic stops in 2022.

TABLE 5:
SEARCH STATISTICS FOR MISSOURI

	Total	White	Black	Hispanic	Native American	Asian
Probable cause	.	.	.	.	.	.
Consent	31892	24885	5497	1093	53	164
Inventory	5530	3957	1299	191	8	33
Drug/alcohol odor	16275	9635	5861	576	19	79
Incident to arrest	28237	19744	6901	1206	45	201
Plain view contra.	6020	4056	1741	162	7	20
Reas. susp-weapon	2025	1069	882	42	6	9
Drug-dog alert	2613	2170	336	87	2	5
Other	1879	1497	316	47	3	6
What searched	.	.	.	.	.	.
Driver	16692	11697	3977	781	27	122
Car/property	15657	11294	3350	733	32	139
Driver & Property	42767	31091	9979	1246	52	157
Search duration	.	.	.	.	.	.
0-15 minutes	67792	48501	15865	2526	100	397
16-30 minutes	7336	5687	1368	210	11	24
31+ minutes	1833	1434	296	81	2	9
Contraband found	.	.	.	.	.	.
Drugs/alcohol	29351	21208	6987	870	40	106
Currency	300	159	114	18	0	5
Weapon	2793	1264	1454	54	2	6
Stolen property	800	548	238	9	1	0
Other	787	612	129	32	1	9
Arrest charge	.	.	.	.	.	.
Outstanding warrant	22307	14941	6710	450	26	74
Drug violation	11030	8220	2462	247	13	33
Resist arrest	1844	1176	597	53	2	7
Off against person	1082	742	294	32	1	5
Traffic violation	22452	17501	3844	819	39	124
DWI/BAC	14225	10785	2260	873	28	151
Property offense	1354	906	404	27	5	3
Other	8891	7312	1193	244	11	65

Notes: Data reported by the agency to the Attorney General's Office covering all traffic stops in 2022.

NON-COMPLIANT AGENCIES

- **Archie Police Dept.**
- **Blackburn Police Dept.**
- **Butterfield Police Dept.***
- **Clarkson Valley Police Dept.**
- **Country Club Hills Police Dept.**
- **Crane Police Dept.**
- **Delta Police Dept.**
- **Eminence Police Dept.**
- **Exeter Police Dept.**
- **Fairview Police Dept.**
- **Frankford Police Dept.**
- **Gallatin Police Dept.**
- **Garden City Police Dept.**
- **Glasgow Police Dept.**
- **Goodman Police Dept.**
- **Greenwood Police Dept.**
- **Henrietta Police Dept.**
- **Hillsdale Police Dept.**
- **Iron Mountain Lake Police Dept.***
- **King City Police Dept.**
- **Lambert Airport Police Dept.**
- **Leadington Police Dept.**
- **Leadwood Police Dept.**
- **Lilbourn Police Dept.**

- **Lowry City Police Dept.**
- **Morehouse Police Dept.**
- **Osceola Police Department**
- **Polo Police Dept.**
- **Shannon County Sheriff's Dept.**
- **Strasburg Police Dept.**
- **Unionville Police Dept.**
- **Viburnum Police Dept.**

* Agency did not submit data by the statutory deadline, but did provide data for inclusion in the report.

AGENCIES WITH ZERO STOPS

- **Birch Tree Police Dept.**
- **BNSF Railway Police Dept.**
- **Bunker Police Dept.**
- **Cameron Schools Police Dept.**
- **Canalou Police Dept.**
- **Carter County Sheriff's Dept.**
- **City of Bellerive Acres Police Dept.**
- **Clarkson Valley Police Dept.**
- **Delta Police Dept.**
- **East Lynne Police Dept.**
- **Ellington Police Dept.**
- **Emma Police Dept.**
- **Farber Police Dept.**
- **Highlandville Police Dept.**
- **Indian Point Police Dept.**
- **Jackson County Drug Task Force**
- **Keytesville Police Dept.**
- **Liberal Police Dept.**
- **Marston Police Dept.**
- **Matthews Police Dept.**
- **Mineral Area College DPS**
- **Missouri Department of Revenue**
- **Missouri Division of Alcohol & Tobacco Control**
- **Moline Acres Police Dept.**
- **Morley Police Dept.**
- **New Madrid Police Dept.**
- **Nixa Schools Police Dept.**
- **Pasadena Hills Police Dept.**
- **Pineville Police Dept.**
- **Rutledge Police Dept.**
- **St. Louis Community College Police Dept.**
- **St. Louis County Park Rangers Dept.**
- **Terminal Railroad Association of St. Louis Police Dept.**
- **Texas County Sheriff's Dept.**
- **Union Pacific RR Police-Kansas City/St Louis Police Dept.**

APPENDIX
POPULATION DATA

As discussed in the report, population estimates factor into the calculation of the Disparity Index. Thus, it is important to use the most accurate population estimates available. In this report, the 2021 5-year American Community Survey population estimates are used for each agency with the 2020 Decennial Census estimates reported for comparison. However, past reports have used other estimates, which makes year to year comparisons difficult. Specifically, the 2011-2019 reports used population estimates from the 2010 Decennial Census, which were more accurate earlier in the decade and gradually became outdated in later years. It is important to note that some of the changes in the Disparity Index, either positive or negative, are due to both changes in traffic stops and the change in the population estimates.

Figure 5 plots the 2022 Disparity Index calculated using both the 2021 ACS and 2020 Decennial population for each agency by race. The 45-degree line indicates where the two indices are the same. Points above the line are agencies with a higher Disparity Index using the more recent population estimates, while points below the line are agencies with a higher Disparity Index using the 2020 population estimates[5]. The prevalence of agencies below the line for many racial/ethnic groups suggests that many agencies' disparity indices may have been driven higher by increasing diversity in their residential populations since the last decennial census, though this is not the case for all agencies.

One notable change over time is the percent of the population that is classified as "other", i.e. two or more races (see Figure 6). Specifically, the share of the population in Missouri categorized as Other has increased from 1% to 4.86% from 2000 to 2021 with a decline in the share of the population classified as White from 86.4% to 81.8%. Other populations have remained relatively stable with Black increasing 10.4% to 10.9%, Hispanic increasing from 1.8% to 3.7%, Asian increasing 1.4% to 2.1% and Native American decreasing from 1% to 0.3%.
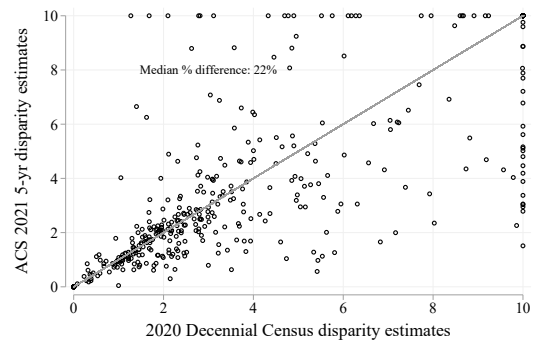
[5]The Disparity Index is truncated at 10 to make the graphs more readable, which creates some of the observed clustering along the perimeter of the figures.

FIGURE 5:

DIFFERENCES BETWEEN DISPARITY INDICES USING DECENNIAL 2020 & AMERICAN COMMUNITY SURVEY 2021
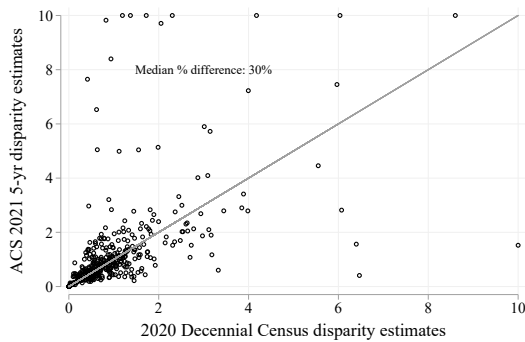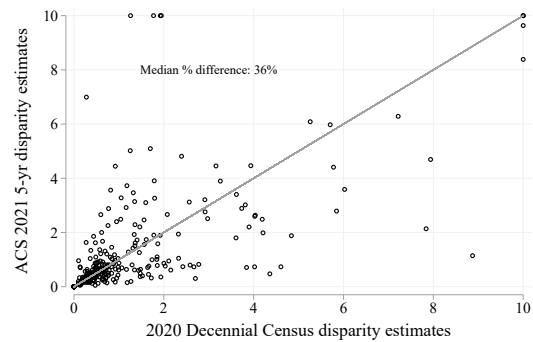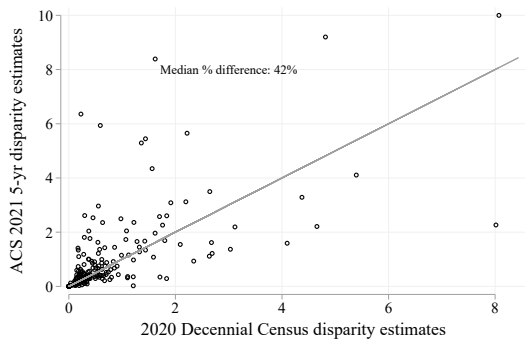
(a) White
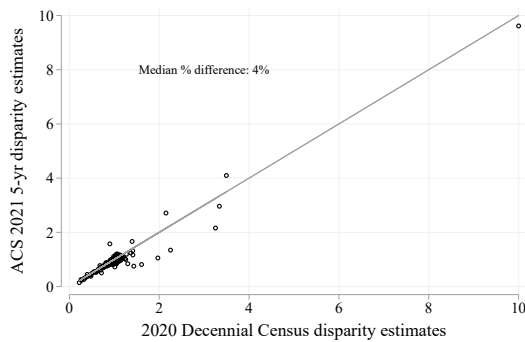
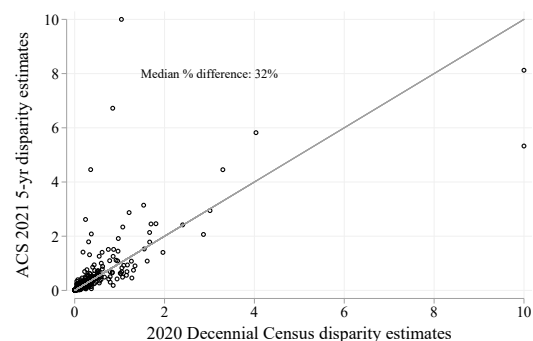### (b) Black

(c) Hispanic

(d) Asian

(e) Native American

(f) Other

Notes: The disparity indices based on the population estimates from the five-year 2021 American Community Survey for ages 16+, used in this report, and the 2020 Decennial Census for ages 15+ are plotted on the y- and x-axis, respectively. A 45 degree line is plotted in each graph depicting the line of equality between the two measures. Each dot represents an agency. The disparity indices are truncated at 10 for visualization purposes.

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